# DEPARTMENT OF ENVIRONMENTAL CONSERVATION

# AIR QUALITY OPERATING PERMIT

Permit No. 265TVP01 Issue Date: July 29, 2002
Application No. 265 Expiration Date: August 29, 2007

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **BP Exploration (Alaska) Inc.**, for the operation of the **Crude Oil Topping Unit** at Prudhoe Bay.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

This Operating Permit becomes effective August 29, 2002.

John F. Kuterbach, Manager

Air Permits Program

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## List of Abbreviations Used in this Permit

AAC .....Alaska Administrative Code
ADEC.....Alaska Department of Environmental Conservation
AP-42 .....EPA report, Compilation of Air Pollutant Emission Factors
AS.....Alaska Statutes
ASTM.....American Society for Testing and Materials
Bbls.....U. S. petroleum Barrels
CEM…... .....Continuous Emission Monitoring System
C.F.R. .....Code of Federal Regulations
COTU.....Crude Oil Topping Unit
dscf.....Dry standard cubic feet
EPA .....US Environmental Protection Agency
gr./dscf.....grain per dry standard cubic feet (1 pound = 7000 grains)
GPH.....gallons per hour
HAPs .....Hazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
ID.....Source Identification Number
KPa.....Kilopascal
LHV.....Low Heating Value
mg/dscm.....milligram per dry standard cubic meter
MACT .....Maximum Achievable Control Technology [as defined in 40 C. F. R. 63]
MMBtu/hr.....Millions of British thermal units per hour
MCC.....Main Construction Camp
Mlb .....thousand pounds
MR&R.....Monitoring, recordkeeping and reporting
MSCFD.....Thousands of standard cubic feet per day
NESHAPs.....Federal National Emission Standards for Hazardous Air Pollutants [as defined in 40 C.F.R. 61]
NSPS.....Federal New Source Performance Standards [as defined in 40 C.F.R. 60]
PBOC.....Prudhoe Bay Operations Center
PPM.....Parts per million by volume dry basis unless otherwise noted
PM-10.....Particulate Matter, 10 micron [as defined in 18 AAC 50.990]
PS .....Performance specification
PSD .....Prevention of Significant Deterioration
RM.....Reference Method
SIC .....Standard Industrial Classification
$SO_2$.....Sulfur dioxide
TPY .....Tons per year

VOC.....volatile organic compound [as defined in 18 AAC 50.990(103)]
wt%.....weight percent

## *Section 1. Identification*

### Names and Addresses

| | |
|---|---|
| Permittee: | **BP Exploration (Alaska) Inc**.<br>P. O. B. 196612<br>Anchorage, Alaska 99519-6612 |
| Facility: | **Crude Oil Topping Unit** |
| Location: | Sect. 11, T 11N, R 14E, Umiat Meridian |
| Physical Address: | Sect. 11, T 11N, R 14E, Umiat Meridian |
| Owners: | BP Exploration (Alaska) Inc.<br>P.O. Box 196612<br>900 East Benson Blvd<br>Anchorage, AK 99519-6612<br><br>Phillips Alaska, Inc.<br>P.O. Box 100360<br>700 G Street<br>Anchorage, AK 99510- 360<br><br>Forcenergy Inc.<br>3838 N. Causeway Blvd<br>Suite 2300<br>Metarie, LA 70002<br><br>Exxon Company U.S.A.<br>P.O. Box 2180<br>800 Bell St. Rm 2917<br>Houston TX 77252-2180 |
| Operator: | BP Exploration (Alaska) Inc. |
| Permittee's Responsible Official | George Blankenship, Field Manager |
| Designated Agent: | CT Corporation System<br>801 W 10th St, Suite 300<br>Juneau, AK 99801 |
| Facility and Building Contact: | Operations Manager<br>(907) 659-5492 |
| Fee Contact: | James A. Pfeiffer |
| SIC Code of the Facility: | 1311 Crude Petroleum and Natural Gas |
| NAICS Code of the Facility: | 211111 |

[18 AAC 50.350(b), 1/18/97]

## *Section 2. General Emission Information*

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Nitrogen Oxides, Carbon Monoxide, Sulfur Dioxide, Particulate Matter (PM-10), Volatile Organic Compounds, p-Xylenes, m-Xylenes, Toluene, Xylene-isomers, Formaldehyde, Benzene, Naphthalene, o-Xylenes, Halon 1301, Reduced Sulfur Compounds, and Hydrogen Sulfide.

Operating Permit Classifications:

1. 18 AAC 50.325(b)(3)
2. The facility aggregated with PBOC & MCC is described in 18 AAC 50.325(b)(1)

The Facility is not described under 18 AAC 50.300(b)-(f).

[18 AAC 50.350(b), 1/18/97]

## *Section 3. Fee Requirements*

**1. General.** The Permittee shall pay assessed fees in accordance with AS 46.14.240 -- 250 and 18 AAC 50.400 -- 420.

[18 AAC 50.350(c) & 18 AAC 50.400 – 420, 1/18/97]

**2. Assessable Emissions.** The Permittee shall pay to the department annual emission fees based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of:

2.1 The facility's assessable potential to emit of 82 TPY (37 tons of $NO_x$, and 45 tons of tons of CO), or

2.2 The facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by;

a. An enforceable test method described in 18 AAC 50.220;

b. Material balance calculations;

c. Emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or

d. Other methods and calculations approved by the department.

[18 AAC 50.350(c) & 18 AAC 50.410, 1/18/97]

**3. Assessable Emission Estimates.** Emission fees will be assessed as follows:

3.1 No later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emission Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795. The submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates, or;

3.2 If no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 2.1.

3.3 The estimate of assessable emissions provided under Condition 3.1 may include a gross estimate of emissions for any insignificant sources defined under 18 AAC 50.335(q) through (v) and non-road engines located at the facility. Documentation is not required for subsequent submittals unless requested by the department.

[18 AAC 50.350(c) & 18 AAC 50.410, 1/18/97]

## *Section 4. Source Inventory and Description*

[18 AAC 50.350(d)(2) 1/18/97]

Sources listed below have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

**TABLE 1 NSPS Source Inventory**

| ID | Source Name | Source Description | Rating/size | Install Date |
|---|---|---|---|---|
| F1 | Overhead gas Flare | McGill, air-assist | 250 MSCFD | 1969 |
| TK1 | 83-F-1 Storage tank | Residual & Naphtha | 1,500 bbls | 1987 |
| TK2 | 83-F-11 Storage tank | Arctic (No. 1) Diesel | 26,850 bbls | 1988 |
| TK3 | 83-F-4 Storage tank | Arctic (No. 1) Diesel | 5,000 bbls | 1988 |
| TK4 | 83-F-7 Storage tank | Arctic (No. 1) Diesel | 5,000 bbls | 1988 |

**TABLE 2 Non-NSPS Source Inventory**

| ID | Source Name | Source Description | Rating/size | Install Date |
|---|---|---|---|---|
| H1 | Gas-Fired Heater | Econotherm Crude Heater | 22.7 MMBtu/hr[1] | 1969 |
| H2 | Gas-Fired Heater | Radco Crude Heater | 22.7 MMBtu/hr[1] | 1975 |
| H4 | Gas-Fired Heater | Broach Glycol Heater | 7.5 MMBtu/hr[1] | Pre-1975[2] |
| F2 | Emergency Flare | McGill (pilot/purge rating) | 9 MSCFD | 1969 |

[1] Maximum heat input rating
[2] Estimated; actual date unknown

## *Section 5. Source-Specific Requirements*

### Fuel-Burning Equipment

**4. Visible Emissions**. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Sources ID F1, F2, H1, H2, & H4 from TABLE 1 to reduce visibility through the exhaust effluent by either;

a. Greater than 20 percent for a total of more than three minutes in any one hour, [3]or

[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

b. More than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1), 5/3/02]

4.1 For Sources ID F2, H1, H2, & H4 use only natural gas as fuel.

a. Certify in each operating report of Condition 41 that the source only burned natural gas.

b. Report under Condition 39 if any fuel other than natural gas is burned.

4.2 For Source ID F1, combust only natural gas and refinery fuel gas. Comply with 40 C.F.R. 60.18(c)(1).

a. Certify in each operating report of Condition 41 that the source only burned refinery fuel gas and natural gas.

b. Report under Condition 39 if any fuel other than natural gas or refinery fuel gas as defined by 40 CFR 60.101(d) is burned

[18 AAC 50.040(a)(1), (a)(2)(BB), (a)(2)(Z), (b)(1) and (2)(B) and (C), 6/21/98 and 18 AAC 50.0 55(a), 1/18/97]
[Federal Citation: 40 C.F.R. 60.18(b), 7/1/99]
[Federal Citation: 40 C.F.R. 60.11(c), 7/1/99].

[3] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and Condition 12.1 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA. The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

**Monitoring – Visible Emissions**

4.3 Momentarily observe the exhaust from Source ID F1 each operating day during operation for indications of visible emissions (VE). Keep a log of the observations in accordance with Condition 4.6. Each day's observations may be made via remote video camera monitoring from the control room if an operator cannot see the flare's exhaust through a window or does not go outside so they can make direct observations.

a. Initial Monitoring Frequency: Observe the exhaust during each calendar day that Source ID F1 operates.

b. Reduced Monitoring Frequency: After Source ID F1 has been observed on 30 operating days, if during normal operations the source operated without visible emissions in the exhaust for those 30 days, then observe the exhaust at least once in every calendar month that Source ID F1 operates.

**Method 22 VE observations**

4.4 Except as provided in Condition 4.4c(ii), if visible emissions are observed at any time during source ID F1 normal flaring operations, the Permittee shall conduct a visible emission VE evaluation in accordance with 40 C.F.R. 60 Appendix A, Method 22. The Method 22 VE observation period shall not be less than 2-hours in duration, sufficient to document a violation of 40 C.F.R. 60.18(c)(1). If visible emissions are noted for a total of more than 5 minutes [60.18(C)(1)] during the Method 22 VE observation:

[18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60.18(c)(1), 7/1/99]

a. Initiate corrective actions to eliminate visible emissions from the source within 24 hours of the Method 22 VE observation;

b. Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce visible emissions; and

c. After completing the corrective actions:

(i) Conduct a VE evaluation in accordance with 40 C.F.R. 60 Appendix A, Method 22. The Method 22 VE observation period shall not be less than 2-hours in duration.

(ii) If the corrective actions taken under Condition 4.4a do not reduce visible emissions, to a period of 5 minutes or less during the 2-hour Method 22 VE observation, then conduct opacity measurements in accordance with 40 C.F.R. 60 Appendix A, Method 9 and in accordance with Condition 4.5 as soon as possible, but within 24 hours to assess compliance with Condition 4. The 24-hour time limit to conduct opacity measurements may be extended by the department for sufficient cause.

d. Visible emissions observed during startup, shutdown or malfunction shall not be considered a violation of 40 C.F.R. 60.18(c)(1).

[18 AAC 50.350(h), 1/18/97]
[Federal Citation: 40 C.F.R. 60.11(c), 7/1/99]

**Method 9 Opacity Observations**

4.5 If visible emissions are noted during the observations of Condition 4.3 observe the exhaust from Source ID F1, following 40 C.F.R. 60 Appendix A, Method 9, for 18 minutes to obtain 72 consecutive 15-second opacity observations. The Method 9 procedures are used to determine compliance with the opacity standards of Condition 4. Unless corrective actions are occurring, the Method 9 readings must be started as soon as possible, but within 24 hours to assess compliance with Condition 4. The 24-hour time clock is stopped only while corrective actions are occurring. The 24-hour time limit to conduct opacity measurements may be extended by the department for sufficient cause.

**Recordkeeping –**

4.6 For observations of visible emissions per Condition 4.3 and for any Method 22 observations per Condition 4.4, record the following information in a written log for each observation of Source ID F1:

a. From Table 1, the ID of the source observed;

b. The date, time, and duration of the observation;

c. For observations conducted per:

(i) Condition 4.3, whether visible emissions are present or absent in the exhaust plume, or

(ii) Condition 4.4, accumulated time visible emissions are present in the exhaust;

d. A description of the background to the exhaust during the observation;

e. Name of the person making the observation; and

f. Keep records in accordance with Condition 4.4b.

4.7 For EPA 40 C.F.R. 60, Appendix A Method-9 observations:

**a.** The observer shall record the name of the facility, emission source and location, facility type, observer's name and affiliation, and the date. Record the time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background and operating rate (load or fuel consumption rate) on a Visible Emissions Observation Record at the time opacity readings are initiated and completed.

b. The observer shall record the presence or absence of an attached or detached plume and the approximate distance from the emission outlet to the point in the plume at which the observations are made.

c. Record opacity observations to the nearest 5 percent at 15-second intervals on a Visible Emissions Observation Record. Record the minimum number of observations required by the permit. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

d. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. Record the average opacity on the sheet.

**Reporting – Excess Emissions or Permit Deviations**

4.8 In accordance with Condition 39 report excess emissions or permit deviations:

a. The dates and reasons for failure to conduct monitoring or recordkeeping per Conditions 4.3, 4.4, 4.5, 4.6 and 4.7.

b. When the flare's exhaust is visible for more than a total of five (5) minutes during any two (2) consecutive hours, except if the emissions are observed during startup, shutdown or malfunction.

[18 AAC 50.350(i), 1/18/97]
[Federal Citation: 40 C.F.R. 60.11(c), 7/1/99]

c. When the average on any consecutive 24 Method 9 observations exceed 20 percent opacity. Operation during Startup, shutdown or malfunction is not considered exempt from the department's opacity limits.

d. Submit to the department copies of the records required by Condition 4.6a through 4.6e with the report required by Condition 4.9.

**Facility Operating Report**

4.9 Submit with the facility operating report required under Condition 41 copies of records required under Conditions 4.4b, 4.6 through 4.7d, and 4.8a through 4.8c;

[18 AAC 50.050(a)(2), 18 AAC 50.055(a)(1), 1/18/97; 18 AAC 50.350(d), 6/21/98; 18 AAC 50.345/346, 5/3/02, & 18 AAC 50.350(h) – (i), 1/18/97]

a. For each source where Method 9 opacity readings are taken;

(i) Copies of the observation results (i.e. VE and opacity readings) for each source; and

(ii) A summary to include:

(a) The dates and type of observations conducted;

(b) The highest six minute average observed; and

(c) Dates when Condition 4 is violated.

b. The number of days that VE observations per Condition 4.3 were made, and the dates, if any, that a Method 22 VE per Condition 4.4 was observed.

**5. Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from Sources ID F1, F2, H1, H2, & H4 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97; 18 AAC 50.350(d), 6/21/98;]

**6. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as $SO_2$, from Sources ID F1, F2, H1, H2, & H4 to exceed 500 PPM averaged over three hours. For natural gas and refinery fuel gas the $H_2S$ content shall not exceed 4200 PPM unless Permittee can demonstrate compliance at a higher $H_2S$ concentration.

[18 AAC 50.055(c), 1/18/97; 18 AAC 50.350(d), 6/21/98]

6.1 For Refinery Fuel Gas:

**Federal New Source Performance Standards – Petroleum Refineries – Hydrogen Sulfide in Refinery Fuel Gas**

a. The refinery fuel gas shall comply with 40 C.F.R. 60.104(a)(1), 7/1/99.

[18 AAC 50.040(a)(2)(J)), 1/18/97; and 18 AAC 50.350(d), 6/21/98]
[Federal Citation: 40 C.F.R. 60.104(a)(1) and 60.105(e)(3)(ii), 7/1/99]

b. Maintain and operate a continuous refinery fuel gas monitor for $H_2S$ (CEM) in accordance with 40 C.F.R. 60.105(a)(4). Continuously record the $H_2S$ concentration.

c. In the Facility Operating Report required by Condition 41, include an Excess Emissions and Monitoring Systems Performance Report and/or a Summary Report Form, as required by NSPS Subpart A, 40 C.F.R. 60.7(c). Include the 3-month average $H_2S$ content of the fuel gas measured according to Condition 6.1b.

d. Report per Condition 39 and per Condition 6.1c if refinery fuel gas $H_2S$ concentration, measured pursuant to Condition 6.1b, has an arithmetic average of three contiguous 1-hour averages is greater than 230 mg/dscm.

[18 AAC 50.040(a)(2)(J)), and 18 AAC 50.350(g) - (i), 1/18/97]
[Federal Citation: 40 C.F.R. 60.105(e)note & 60.105(e)(3)(ii), 7/2/99]

6.2 Monitoring for both natural gas and for refinery fuel gas.

a. The Permittee or fuel supplier for both gases shall conduct: 1) semi-annual tests and 2) tests upon a change in the supply of fuel gas, and keep records of the tests, to determine:

(i) The sulfur ($H_2S$) content of the natural gas;

(ii) The $H_2S$ content of the refinery fuel gas; and

(iii) The lower heating value (LHV) of the refinery fuel gas flared at the facility.

b. Acceptable methods for $H_2S$ are ASTM D-4810-88, ASTM D-4913-89, and Gas Producers Association (GPA) method 2377-86, a portable $H_2S$ analyzer or a CEM per Condition 6.1b. The Permittee shall determine and keep records of the LHV from the gross heating value using ASTM D-1826, D-4891 or from a calculation method based on the semiannual refinery fuel gas composition analysis. The Permittee may propose to the department alternative monitoring procedures. The alternative monitoring procedures must satisfy the underlying purpose for this monitoring and 18 AAC 50.350(g) and (h).

c. Report under Condition 39 whenever natural or refinery fuel gas is received that does not meet the requirements of Condition 6 or Condition 6.1. When reporting under Condition 6, include a material balance calculation of the sulfur compound emissions, in PPM, expected from combustion of natural or refinery fuel gas exceeding 4200 PPM $H_2S$. The material balance may be made in accordance with Section 15.

d. Include in the facility operating report required by Condition 41 a list of the $H_2S$ content analysis results obtained during the reporting period, and any reports required by Condition 6.2c. Report the natural and refinery fuel gas $H_2S$ concentration in gr/dscf and PPMv. For the flared refinery fuel gas, report the LHV in BTU/scf, for any analysis accomplished during the quarter and

identify the analytical method. Reported data for both fuel gases may be in the form of monthly averages.

[18 AAC 50.350(g) - (i), 1/18/97]
[18 AAC 50.410(c), 1/18/97]

## Federal New Source Performance Standards- Volatile Organic Liquid Storage Vessels

**7.** For Source IDs TK1 through TK4, the Permittee shall comply with 40 C.F.R. 60.110b(c) & 40 C.F.R. 60.116b(a) – (b), 7/1/99.

[18 AAC 50.040(a)(2)(M), 1/18/97]
[Federal Citation: 40 C.F.R. 60.110b(c) & 40 C.F.R. 60.116b(a) – (b), 7/1/99]

**8.** For Source ID TK1 the Permittee shall comply with 40 C.F.R. 60.112b(a)(3)(i)-(ii), 7/1/99.

8.1 Report per Condition 39 when VOC leaks exceeding VOC background by more than 500 PPM are discovered.

8.2 Keep records of all data collected per 40 C.F.R. 60.112b(a)(3)(i)-(ii), 7/1/99 and keep copies of all reports under Condition 8.1.

[18 AAC 50.350(g) - (i), 1/18/97]
[Federal Citation: 40 C.F.R. 60.112b(a)(3)(i)-(ii) & 60.113b(c)(1), 7/1/99]

## Federal New Source Performance Standards- General Provisions

**9.** For Sources IDs F1 and TK1 comply with NSPS Subpart A, 40 C.F.R.: 60.7(b), 60.7(c), 60.7(d); 60.11(d), 60.11(g), 60.12; and 60.13(h).

[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60 Subpart A), 7/1/99]

**10.** For the refinery fuel gas flare, Source ID F1, attach to the operating report required by Condition 41 a copy of each quarterly excess emission and monitoring systems performance report required under Condition 9.

[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60.7(c), 7/1/99]

## General Control Device Requirements

**11.** The Permittee shall design, operate, and monitor Source ID F1 flare to comply with 40 C.F.R. 60.18(c)(1), (c)(2), (c)(3), (c)(5), and (c)(6); 60.18(d); 60.18(e); and 60.18(f)(1), (f)(2), (f)(3), (f)(4), and (f)(6).

[Federal Citation: 40 C.F.R. 60.112b(a)(3)(ii) and 60.113b(d), 7/1/99]

11.1 Permittee shall maintain records of all periods of operation during which the flare pilot flame is absent per 40 C. F. R. 60.18(c)(2) and shall report any flame out in accordance with Condition 39.

[18 AAC 50.040(a)(1) & (a)(2((M), and 18 AAC 50.350(g)-(i), 6/21/98]
[Federal Citation: 40 C.F.R. 60.115b(d)(2) & (3), 7/1/99]

11.2 The Permittee shall keep records showing the heating value of any gas or vapor vented to the flare. The heating value (LHV) is obtained in accordance with Condition 6.2.

[18 AAC 50.040(a)(1) & (a)(2(M), and 18 AAC 50.350(g)-(i), 6/21/98]
[Federal Citation: 40 C.F.R. 60.18(c)(3), 7/1/99]

11.3 Report in accordance with Condition 39 when the heating value of the gas to be combusted is less than 300 Btu/scf.

[18 AAC 50.350(g) - (i), 1/18/97]

11.4 The Permittee shall keep records of the initial performance test and any subsequent test(s) requested by the department or by EPA which show the actual velocity. The tests shall be conducted using the EPA, 40 C.F.R. 60, Appendix A, Reference Methods 2, 2A, 2C, 2D or other method approved by EPA.

[18 AAC 50.350(g) - (i), 1/18/99]

11.5 Report in accordance with Condition 39 when the actual velocity obtained as a result of tests conducted per Condition 11.4 exceeds the maximum permitted velocity determined in accordance with 40 C.F.R. 60.18(f)(6).

[18 AAC 50.040(a)(1), (a)(2)(BB), (a)(2)(Z), (b)(1) and (2)(B) and (C), and 18 AAC 50.350(g)-(I), 6/21/98]
[Federal Citation: 40 C.F.R. 60.18, 7/1/99]

## *Section 6. Insignificant Sources*

**12. Insignificant Sources.** For sources at the facility that are insignificant as defined in 18 AAC 50.335(q)-(v) that are not listed in this permit, the following apply:

12.1 Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Insignificant Sources to reduce visibility through the exhaust effluent by either;

a. Greater than 20 percent for a total of more than three minutes in any one hour[4], or,

[18 AAC 50.055(a)(1), 1/18/97 & 40 CFR 52.70, 11/18/98]

b. More than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1), 5/3/02]
[18 AAC 50.050(a)(2) & 50.055(a)(1), 1/18/97]

12.2 The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

12.3 The Permittee shall not cause or allow sulfur compound emissions, expressed as $SO_2$, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

12.4 The Permittee shall comply with the requirements of Condition 23.

12.5 The Permittee shall report in the operating report of Condition 41 if a source once insignificant because of actual emissions less than the thresholds of 18 AAC 50.335(r) has actual emissions greater than any of those thresholds.

[18 AAC 50.350(i), 1/18/97]

12.6 Based on reasonable inquiry, the Permittee shall certify compliance with the requirements specified in Conditions 12.1, 12.2, and 12.3 as set out in Condition 42.

[18 AAC 50.350(m)(3), 6/21/98]

12.7 No other monitoring, recordkeeping, or reporting are required.

[18 AAC 50.346(b)(1), 5/3/02]

[4] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition and Condition 4 will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA. The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

## *Section 7. Facility-Wide Requirements*

**13. Source Aggregation.** The Permittee shall aggregate potential emissions from Source ID(s) 1 through 19 from the Prudhoe Bay Operations Center and Main Construction Camp for the purpose of determining classification under 18 AAC 50.325 and Legal Basis with the modification requirements of 18 AAC 50.300(h)(3).

[18 AAC 50.990(37), 1/18/97]
[18 AAC 50.910, 1/18/97]

## *Section 8. Compliance Plan and Schedule*

As set out in 18 AAC 50.350(k)(5), the compliance plan and schedule included in this Operating Permit do not provide the shield of AS 46.14.290 and do not prevent the department from pursuing an enforcement action.

The facility is not in compliance with 40 C.F.R. 60.18(c)(5), 60.18(f)(4), 60.112b(a)(3)(ii), 60.113b(d) and 60.115b(d)(1) solely because it has not calibrated the installed orifice plate flow meter in the process flare system using EPA's 40 C.F.R. 60, Appendix A Reference Method 2D. Permittee believes the orifice plate to be accurate and calibration to be infeasible at this time.

**14.** Within two years of the effective date of the permit either:

14.1 Obtain a waiver of the calibration requirement from EPA, or

14.2 Calibrate the orifice plate using a method acceptable to EPA.

14.3 Every six months from the effective date of the permit, submit to the department a certified progress report on the status of satisfying this condition.

14.4 The report shall include a schedule for accomplishing Condition 14.2 assuming EPA fails to grant the waiver of Condition 14.1.

14.5 The report shall include an estimated date for accomplishing Condition 14.

[18 AAC 50.350(k), 9/4/98]

## *Section 9. Generally Applicable Requirements*

**15. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, and 61.150, Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

**16. Benzene Waste Operations NESHAP.** The Permittee shall maintain records of each waste stream not controlled for benzene emissions as prescribed by 40 CFR 61.356(b)(1), prepare and submit an initial report to document each waste stream in accordance with 40 CFR 61.357(a) and shall update the initial report in the event a change in the process generating the waste has occurred that could cause the total annual benzene quantity from facility waste to increase to 1 Mg/yr or more in accordance with 40 CFR 61.357(b).

[18 AAC 50.040(b)(2)(E) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 61, Subpart FF, 12/19/96]

**17. Protection of Stratospheric Ozone.** The Permittee shall comply with the applicable standards for recycling and emission reduction of substances set forth in 40 C.F.R. 82.154, 82.156, 82.161, 82.162, & 82.166.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 82, .Subpart F, 7/1/97]

17.1 **Prohibitions – Significant New Alternatives Policy Programs.** The Permittee shall comply with the prohibitions set out in 40 C.F.R. 82.174(b) through (d) (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program) pertaining to substitute products for ozone-depleting compounds.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 82.174(b)-(d), 7/1/97]

17.2 **Prohibitions – Halon Emissions Reduction**. The Permittee shall comply with the prohibitions set out in 40 C.F.R. 82.270(b) through (f) (Protection of Stratospheric Ozone Subpart H – Halon Emissions Reduction).

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 82.270(b)-(f) 7/1/97]

**18. Good Air Pollution Control Practice.** The Permittee shall do the following for sources ID F2, H1, H2, and H4.

18.1 Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures.

18.2 Keep records of any maintenance that would have a significant effect on emissions; the records may be in electronic format.

18.3 Keep a copy of either the manufacturer's or the operator's maintenance procedures.

[18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

**19. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

**20. Reasonable Precautions to Prevent Fugitive Dust.** The Permittee shall take reasonable precautions to prevent particulate matter (PM) from being emitted into the ambient air as a result of industrial activities, construction projects, or the handling, transportation, and storage of bulk materials.

20.1 The Permittee shall keep records of;

a. Complaints received by the Permittee and complaints received by the department and conveyed to the Permittee; and
b. Any additional precautions that are taken
   (i) To address complaints described in Condition 20.1a or to address the results of department inspections that found potential problems; and
   (ii) To prevent future dust problems.

20.2 The Permittee shall report according to Condition 23.

[18 AAC 50.040(e), 7/2/00]
[18 AAC 50.346(c), 5/3 /02; 18 AAC 50.045(d) & 18 AAC 50.350(d)(1), 1/18/97]

**21. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department.

[18 AAC 50.055(g), 1/18/97]

**22. Open Burning.** The Permittee shall comply with 18 AAC 50.065.

[18 AAC 50.065(b) & 50.350(d)(1), 1/18/97]

**23. Air Pollution Prohibited.** No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 1/18/97]

**24. Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited**

24.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 39.

24.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 23.

24.3 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. After an investigation because of a complaint or other reason, the Permittee believes that emissions from the facility have caused or are causing a violation of Condition 23; or

b. The department notifies the Permittee that it has found a violation of Condition 23.

24.4 The Permittee shall keep records of:

a. The date, time, and nature of all emissions complaints received;

b. The name of the person or persons that complained, if known;

c. A summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 23; and

d. Any corrective actions taken or planned for complaints attributable to emissions from the facility.

24.5 With each facility operating report under Condition 41, the Permittee shall include a brief summary report which must include:

a. The number of complaints received;

b. The number of times the Permittee or the department found corrective action necessary;

c. The number of times action was taken on a complaint within 24 hours; and

d. The status of corrective actions the Permittee or department found necessary that were not taken within 24 hours.

24.6 The Permittee shall notify the department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

[18 AAC 50.240(c) & 18 AAC 50.350(h)-(i), 1/18/97]
[18 AAC 50.346(a)(2, 5/3/02]
[18 AAC 50.040(e), 7/2/00]
[18 AAC 50.110, 5/26/72]
[18 AAC 50.350(d)(1), 1/18/97]

**25. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

[18 AAC 50.235(a) and 18 AAC 50.350(f), 1/18/97]

**26. Permit Renewal**. To renew this permit, the Permittee shall submit an application under 18 AAC 50.335 no sooner than February 28, 2006 and no later than February 28, 2007 to renew this permit**.**

[18 AAC 50.335(a), 1/18/97]

## *Section 10. General Source Testing and Monitoring Requirements*

**27. Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.345(k), 5/3/02]

**28. Extension Request.** The Permittee may request an extension to a source test deadline established by the department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the department's appropriate division director or designee.

[18 AAC 50.345(l), 5/3/02]

**29. Test Plans. B**efore conducting any source tests requested per Condition 27, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the source will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 27 and at least 30 days before the scheduled date of any test unless the department agrees in writing to some other time period. Retesting may be done without resubmitting the plan. The Permittee is not required to comply with this condition when the exhaust is observed for visible emissions.

[[18 AAC 50.220(c)(3), 50.350(b)(3), 50.350(g) & 50.990(88), 1/18/97]
& 18 AAC 50.345(a) & (m), 5/3/02]

**30. Test Notification.** At least 10 days before conducting a source test requested per Condition 27, the Permittee shall give the department written notice of the date and the time the source test will begin. The Permittee is not required to comply with this condition when the exhaust is observed for visible emissions.

[18 AAC 50.345(a) & (n), 5/3/02, and 18 AAC 50.350(b)(3), 1/18/97]

**31. Test Reports.** Within 60 days after completing a source test requested per Condition 27, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in accordance with Condition 35. If requested in writing by the department, the Permittee must provide preliminary results in a shorter period of time specified by the department. The Permittee is not required to comply with this condition when the exhaust is observed for visible emissions.

[18 AAC 50.350(b)(3) and 18 AAC 50.350(h) – (i), & 18 AAC 50.345(a) & (o), 5/3/02]

**32. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing.

[18 AAC 50.220(b) & 50.350(g), 1/18/97]

32.1 At a point or points that characterize the actual discharge into the ambient air; and

32.2 At the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(a), 18 AAC 50.345(a)(10), 1/18/97]

**33. Reference Test Methods.** The Permittee shall use the following as reference test methods, or other methods approved by the department when conducting source testing or visible emissions observations for compliance with this permit.

33.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00, 18 AAC 50.220(c)(1)(A) and 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, 7/1/99]

33.2 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00, 18 AAC 50.220(c)(1)(E) and 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, Appendix A, 7/1/99]

33.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 50.220(c)(1)(B) & 50.350(g), 1/18/97]
[40 C.F.R. 61, 12/19/96]

33.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in 40 C.F.R. 60, Appendix A method 9.

[18 AAC 50.030, 12/30/00]
[18 AAC 50.220(c)(1)(D) & 50.350(g), 1/18/97]

**34. Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions[5].

[18 AAC 50.220(c)(3), 50.350(g) & 50.990(88), 1/18/97]

[5] *Standard conditions* means dry gas at 68° F and an absolute pressure of 760 millimeters of mercury, as defined in 18 AAC 50.990(88) effective 7/2/00.

## *Section 11. General Recordkeeping, Reporting, and Compliance Certification Requirements*

**35. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department under this permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." When certifying the annual compliance certification, the official's signature must be notarized. For the same three-month reporting period, the excess emission and permit deviation reports submitted per Condition 39 may be certified with the facility operating report required by Condition 41. All other reports must be certified upon submittal.

[18 AAC 50.205, 18 AAC 50.350(b)(3) and 18 AAC 50.350(i) 1/18/97, and 18 AAC 50.345(j), 5/3/02]

**36. Submittals.** Unless otherwise directed by the department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

**37. Information Requests.** The Permittee shall furnish to the department, within a reasonable time, any information that the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by this permit. The department may require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 18 AAC 50.350(b)(3) and 18 AAC 50.350(g) – (i), 1/18/97, and 18 AAC 50.345(j), 5/3/02]

**38. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including;

38.1 Copies of all reports and certifications submitted pursuant to this section of the permit.

38.2 Records of all monitoring required by this permit, and information about the monitoring including

a. Calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;

b. Sampling dates and times of sampling or measurements;

c. The operating conditions that existed at the time of sampling or measurement;

d. The date analyses were performed;

e. The location where samples were taken;

f. The company or entity that performed the sampling and analyses;

g. The analytical techniques or methods used in the analyses; and

h. The results of the analyses.

[18 AAC 50.350(h), 1/18/97]

**39. Excess Emission and Permit Deviation Reports.** Except as provided in Condition 23, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

39.1 In accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report;

a. Emissions that present a potential threat to human health or safety; and

b. Excess emissions that the Permittee believes to be unavoidable;

39.2 in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

39.3 Report all other excess emissions and permit deviations.

a. Within 30 days of the end of the month in which the emission or deviation occurs, except as provided in Conditions 39.3 b and 39.3c;

b. If a continuous or recurring excess emission is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the department provides written permission to report under Condition 39.3 a;

c. For failure to monitor, as required in other applicable conditions of this permit.

39.4 When reporting excess emissions, the Permittee must report using either the department's online form, which can be found at www.dec.state.ak.us/awq/excess/report.asp or, if the Permittee prefers, the form contained in Section 14 of this permit. The Permittee must provide all information called for by the form that is used.

39.5 When reporting a permit deviation, the Permittee must report using the form contained in Section 14 of this permit. The Permittee must provide all information called for by the form.

39.6 If requested by the department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97, 18 AAC 50.346(a)(3), 5/3/02]

**40. NSPS and NESHAP Reports.** The Permittee shall submit to the department copies of any reports required by this permit as they apply to the facility as follows:

40.1 Attach a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 to the facility operating report required by Condition 41 unless copies have already been provided to the department at the time submitted to EPA.

40.2 The Permittee shall notify the department and, shall provide a written copy of any EPA granted waivers of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules within 30 days after receipt of a waiver or schedule. Keep a copy of each EPA issued monitoring waiver or custom monitoring schedule with the permit on file.

[18 AAC 50.040, 7/2/00, and 18 AAC 350(i)(2), 1/18/97]
[Federal Citation 40 C.F.R. 60 and 40 C.F.R. 61, 7/1/99]

**41. Operating Reports.** During the life of this permit, the Permittee shall submit an original and two copies of an operating report by April 30 for the period January 1 to March 31, by July 30 for the period April 1 to June 30, by October 30 for the period July 1 to September 30, and by February 14 for the period October 1 to December 31 of the previous year.

41.1 The operating report must include all information required to be in operating reports by other conditions of this permit.

41.2 If an excess emission or permit deviation that occurred during the reporting period is not reported under Condition 39, either

a. The Permittee shall identify:

(i) The date of the deviation;

(ii) The equipment involved;

(iii) The permit condition affected;

(iv) A description of the excess emission or permit deviation; and

(v) Any corrective action or preventive measures taken and the date or dates of such actions; or

b. When an excess emission or permit deviation has already been reported under Condition 39, the Permittee may cite the date or dates of those reports.

41.3 The operating report must include a listing of emissions monitored under Condition 4.3 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report;

a. The date of the emissions;

b. The equipment involved;

c. The permit condition affected; and

d. The monitoring result which triggered the additional monitoring

[18 AAC 50.350(d)(4), 18 AAC 50.350(f)(3) &18 AAC 50.350(i), 1/18/97, and 18 AAC 50.346(a)(3), 5/3/02]

**42. Annual Compliance Certification.** Each year by March 31, for reporting periods following issuance of this permit, the Permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

42.1 For each permit term and condition set forth in Section 3 through Section 13 including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

a. Certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;

b. State whether compliance is intermittent or continuous;

c. Briefly describe each method used to determine the compliance status; and

d. Notarize the responsible official's signature.

42.2 Submit a copy of the report directly to the U.S. EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.205 and 50.350(j), 1/18/97]

## *Section 12. Standard Conditions Not Otherwise Included in the Permit*

**43.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

43.1 An enforcement action,

43.2 Permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280, or

43.3 Denial of an operating-permit renewal application.

[18 AAC 50.345(c), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

**44.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(d), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

**45.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(e), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

**46.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

46.1 Included and specifically identified in the permit; or

46.2 Determined in writing in the permit to be inapplicable.

[18 AAC 50.345(b), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

**47.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.345(f), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

**48.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(g), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

**49.** The Permittee shall allow the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

49.1 Enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

49.2 Have access to and copy any records required by the permit;

49.3 Inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit; and

49.4 Sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(h), 5/3/02 and 18 AAC 50.350(b)(3), 1/18/97]

## *Section 13. Permit As Shield from Inapplicable Requirements*

In accordance with AS 46.14.290, and based on information supplied in the facility application and follow-up information, this section of the permit contains the requirements determined by the department not to be applicable to the permitted facility.

Table 3 below identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance.

**50.** If any of the requirements listed in Table 3 become applicable during the permit term, the Permittee shall comply with such requirements on a timely basis. The Permittee shall also provide appropriate notification to EPA, apply for a construction permit or an operating permit revision, as necessary.

[18 AAC 50.350(l), 1/18/97]

**Table 3 Permit Shields Granted.**

| Source ID | Non Applicable Requirements | Reason for non-Legal Basis |
|---|---|---|
| Flare:<br>F2 | 40 C.F.R. 60 Subpart A - General Provisions<br>§60.18 - General Control Device Requirements | This flare is not a control device used to comply with applicable Subparts of 40 C.F.R. 60 and 40 C.F.R. 61. |
| Gas-Fired Heaters:<br>H-1<br>H-2<br>H-4 | 40 C.F.R. 60 Subpart D - Standards of Performance for Fossil Fuel-Fired Steam Generators | Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Fossil-Fuel-Fired Steam Generators*, as defined in subpart. |
| | 40 C.F.R. 60 Subpart Da - Standards of Performance for Electric Utility Steam Generating Units | Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Electric Utility Steam Generating Units*, as defined in subpart. |
| | 40 C.F.R. 60 Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units | Heat input capacities below threshold (100 MMBtu/hr); and commenced construction prior to effective date of subpart (June 19, 1984) |
| Gas-Fired Heaters:<br>H-1<br>H-2 | 40 C.F.R. 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units | Commenced construction prior to effective date of subpart (June 9, 1989). |

| Source ID | Non Applicable Requirements | Reason for non-Legal Basis |
|---|---|---|
| Gas-Fired Heater: H-4 | 40 C.F.R. 60 Subpart Dc | Heat input capacities below threshold (10 MMBtu/hr). |
| Gas-Fired Heaters:<br>H1, H2, & H4, and<br>Flare:<br>F2 | 40 C.F.R. 60 Subpart J - Standards of Performance for Petroleum Refineries | These units do not combust "fuel gas" as defined in the subpart [§60.101(d)] and, therefore, do not meet the definition of "fuel gas combustion devices" outlined in §60.101(g). |
| Flare:<br>F1 | 40 C.F.R. 60 Subpart J - Standards of Performance for Petroleum Refineries<br>§60.102 - Standard for Particulate Matter<br>§60.103 - Standard for Carbon Monoxide<br>§60.104(a)(2), (b)-(d) - Standards for Sulfur Oxides<br>§60.105(a)(1)-(2) - Monitoring of Emissions and Operations<br>§60.105(a)(5)-(a)(13), (b), (c), (d), (e)(1)-(2), (4)<br>§60.107 - Reporting and Recordkeeping Requirements<br>§60.108 - Performance Test and Compliance Provisions | Standards and requirements apply to fluid catalytic cracking (FCC) unit catalyst regenerators or Claus sulfur recovery plants. Topping unit does not operate FCC unit catalyst regenerators or Claus sulfur recovery plant. |
| | §60.105(a)(3), (e)(3)(i) - Monitoring of Emissions and Operations | In place of the $SO_2$ monitor in §60.105(a)(3), fuel gas $H_2S$ content is monitored continuously, as provided in §60.105(a)(4). |
| | 40 C.F.R. 60 Subpart A §60.7(a)(4) – Notification and Recordkeeping | This requirement only applies to "existing facilities", as defined in 40 C.F.R. 60.2. |
| Facility-Wide | 40 C.F.R. 60 Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries | Commenced construction prior to effective date of subpart (January 4, 1983). |
| All Storage Tanks TK1, TK2, TK3, & TK4 | 40 C.F.R. 60 Subpart QQQ - Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems | Commenced construction prior to effective date of subpart (May 4, 1987). |
| | 40 C.F.R. 60 Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids | Commenced construction after effective date of subpart (6/11/73 - 5/19/78). |

| Source ID | Non Applicable Requirements | Reason for non-Legal Basis |
|---|---|---|
| Storage Tanks: TK2, TK3, & TK4 | 40 C.F.R. 60 Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids | Commenced construction after effective dates of subpart (5/18/78 - 7/23/84). Except as specified in paragraphs (a) and (b) of 60.116b, vessels with a capacity ≥151 $m^3$ storing a liquid with a maximum true vapor pressure <3.5 kPa (0.5 psia) are exempt from General Provisions - Subpart A, and from the provisions of Subpart Kb. |
| | 40 C.F.R. 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) §60.112b - Standard for volatile organic compounds (VOC) | |
| | §60.113b - Testing and Procedures | |
| | §60.114b - Alternative Means of Emission Limitation | |
| | §60.115b - Reporting and Recordkeeping Requirements | |
| | §60.116b(c) - (g) - Monitoring of Operations | |
| Storage Tank: TK1 | 40 C.F.R. 60 Subpart A - General Provisions | |
| | 40 C.F.R. 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) §60.113b(c) - Testing and Procedures (Operating and Maintenance Plan) | A source equipped with a flare control device is exempt from this requirement. Vapors from this tank are vented directly to, and controlled by, the Overhead Gas Flare (F1) |
| | §60.116b(c) & (d) - Monitoring of Operations | Vessel equipped with a closed vent system and control device meeting the specifications of §60.112b is exempt from monitoring provisions of §60.116b(c) and (d) [ref. §60.116b(g)]. |
| | 40 C.F.R. 60 Subpart A §60.7(a)(4) – Notification and Recordkeeping | This requirement only applies to "existing facilities", as defined in 40 C.F.R. 60.2. Tank TK1 is not an existing facility because it was installed in 1987 (after effective date of Subpart Kb); |
| Flare F1 | 40 C.F.R. 60 Subpart Kb 40 C.F.R. 60 Subpart A - General Provisions §60.18(c)(4) - General Control Device Requirements: Exit Velocity Requirements for Steam-assisted and Non-assisted Flares | The Overhead Gas flare at the COTU is not steam-assisted or non-assisted. This flare is air assisted. |
| Facility – Wide | 40 C.F.R. 61 Subpart A - General Provisions | Requirements only apply to sources subject to any provision of 40 C.F.R. 61. This facility is not subject to 40 C. F. R. 61 Subpart A. |
| | 40 C.F.R. 61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene | No process components in *benzene service*, as defined by subpart (10 percent benzene by weight). |

| Source ID | Non Applicable Requirements | Reason for non-Legal Basis |
|---|---|---|
| | 40 C.F.R. 61 Subpart M - National Emission Standard for Asbestos<br>§61.142 - Standard for Asbestos Mills | Facility is not an Asbestos Mill |
| | §61.143 - Standard for Roadways | Facility roadways not exposed to asbestos tailings or asbestos containing waste |
| | §61.144 - Standard for Manufacturing | Facility does not engage in any manufacturing operations using commercial asbestos |
| | §61.146 - Standard for Spraying | Facility does not spray apply asbestos containing materials |
| | §61.147 - Standard for Fabricating | Facility does not engage in any fabricating operations using commercial asbestos |
| | §61.148 - Standard for Insulating Materials | Facility does not install or reinstall, on any facility component, insulation material containing commercial asbestos |
| | §61.149 - Standard for Waste Disposal for Asbestos Mills | Applies only to those facilities subject to §61.142 (Asbestos Mills) |
| | §61.151 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations | Applies only to those facilities subject to §§61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing or fabricating) |
| | §61.152 - Standard for air cleaning | Facility does not use air cleaning equipment |
| | §61.153 - Standard for Reporting | No reporting requirements apply for sources subject to §61.145 (demolition and renovation) [ref. §61.153(a)] |
| Activities subject to 40 C.F.R. 61 Subpart M - Standard for Demolition and Renovation (§61.145) | §61.154 - Standard for Active Waste Disposal Sites | Facility not an active waste disposal site and does not receive asbestos containing waste material |
| | §61.155 - Standard for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations | Facility does not process regulated asbestos containing material (RACM) |
| | 40 C.F.R. 61 Subpart A - General Provisions<br>§61.05(a) - Prohibited Activities<br>§61.07 – Application for Approval of Construction or Modification<br>§61.09 – Notification of Startup | Owners or operators of demolition and renovation operations are exempt from the requirements of §§61.05(a), 61.07, and 61.09 [ref. 40 C.F.R. 61.145(a)(5)] |
| Facility-Wide | §61.10 – Source Reporting and Waiver Request | Demolition and renovation operations exempt from §61.10(a) [ref. 40 C.F.R. 61.153(b)] |
| Facility-Wide | §61.13 – Emission Tests<br>§61.14 – Monitoring Requirements | Emission tests or monitoring is not required under the standards for demolition and renovation [§61.145] |
| Facility-Wide | 40 C.F.R. 61 Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) | Facility does not operate equipment in volatile hazardous air pollutant (VHAP) service (> 10% VHAP by weight) |

| Source ID | Non Applicable Requirements | Reason for non-Legal Basis |
|---|---|---|
| Facility-Wide | 40 C.F.R. 61 Subpart Y - National Emission Standard for Benzene Emissions from Benzene Storage Vessels | Facility does not operate storage vessels in benzene service |
| Facility-Wide | 40 C.F.R. 61 Subpart BB - National Emission Standard for Benzene Emissions from Benzene Transfer Operations | Facility does not conduct benzene transfer operations |
| Facility-Wide | 40 C.F.R. 61 Subpart FF - National Emission Standard for Benzene Waste Operations (subparts 61.342 through 61.355). | The total annual benzene quantity from facility waste is less than 10 megagrams per year (Mg/yr) as stated in AAI letters dated January 4, 1991 and April 5, 1993. Only the reporting and recordkeeping requirements of §§61.356 and 61.357 apply. |
| | 40 C.F.R. 63 Subpart A - General Provisions | Requirements only apply to sources subject to any provision of 40 C.F.R. 63. This facility is not subject to 40 C.F.R. 63 Subpart A. |
| | 40 C.F.R. 63 Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries | Facility is not a major source of hazardous air pollutants; facility does not include any petroleum refinery process units because all process units at the facility have a SIC code of 1311. |
| Facility- Wide | 40 C.F.R. 63 Subpart HH- National Emission Standards for Hazardous Air Pollutants from Oil and Natural gas Production Facilities | The Crude Oil Topping Unit is not a major hazardous air pollutant "facility", as defined in 40 C.F.R. 63.760, for which Subpart HH is a relevant standard. |
| All Storage Tanks | 40 C.F.R. 63 Subpart OO - National Emission Standards for Tanks - Level 1 | Provisions only apply to tanks affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart OO. |
| Drain Systems | 40 C.F.R. 63 Subpart RR - National Emission Standards for Individual Drain Systems | Provisions only apply to drain systems affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart RR. |
| Oil-Water Separators | 40 C.F.R. 63 Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators | Provisions only apply to oil-water separators and organic-water separators affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63 Subpart VV. |
| Gas-Fired Heaters H-1 , H-4 and H-2 Flares F-1 and F-2 Storage Tanks TK2 –TK4 | 40 C.F.R. 64 - Compliance Assurance Monitoring | These units are not major sources and do not use a control device to achieve compliance with any emission limitation or standard. |

| Source ID | Non Applicable Requirements | Reason for non-Legal Basis |
|---|---|---|
| Storage Tank TK1 | 40 C.F.R. 64 - Compliance Assurance Monitoring | This unit does not have potential pre-control device emissions of an applicable regulated air pollutant equal to or greater than 100 tpy (criteria pollutants), 10 tpy any hazardous air pollutant (HAP), or 25 tpy all HAP combined. |
| Facility-Wide | 40 C.F. R. 68 Accidental Release Prevention Requirements | The only regulated substances present in any process above the threshold quantities are naturally occurring hydrocarbon mixtures. Those are exempt from 40 C.F.R. 68 |
| | 40 C.F.R. 82.1 Subpart A - Production and Consumption Controls | Facility does not produce, transform, destroy, import or export Class 1 or Group I or II substances or products. |
| | 40 C.F.R. 82.30 Subpart B - Servicing of Motor Vehicle Air Conditioners | Facility does not service motor vehicle air conditioners. |
| | 40 C.F.R. 82.60 Subpart C - Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances | Facility is not a manufacturer or distributor of Class I and II products or substances. |
| | 40 C.F.R. 82.80 Subpart D – Federal Procurement | Subpart applies only to federal facilities |
| Facility Wide | 40 C.F.R. 82.100 Subpart E – The labeling of products Using Ozone Depleting Substances | Facility is not a manufacturer or distributor of Class I or Class II products or substances |
| | 40 C.F.R. 82.158 Subpart F – Recycling and Emissions Reduction | Facility does not manufacturer or import recovery and recycling equipment |
| | 40 C.F.R. 82.160 – Approved equipment testing organizations | Facility does not contract equipment testing organizations to certify recovery and recycling equipment. |
| | 40 C.F.R. 82.164 – Reclaimer certification | Facility does not sell reclaimed refrigerant. |
| | 40 C.F.R. 82, Subpart F, Appendix C - Method for Testing Recovery Devices for Use With Small Appliances | Facility is not a third party entity that certifies recovery equipment. |
| | 40 C.F.R. 82, Subpart F, Appendix D - Standards for Becoming a Certifying Program for Technicians | Facility does not have a technician certification program. |
| | 40 C.F.R 82.174(a) Subpart G – Significant New Alternatives Policy Program. | Facility does not manufacture substitute chemicals or products for ozone-depleting compounds. |
| | 40 C.F.R. 82.270(a), Subpart H- Halon Emissions Reduction. | Facility does not manufacture halon. |
| | 18 AAC 50.055(d) - Petroleum Refinery Emissions | Sources were constructed and/or last modified before November 1, 1982. |

For sources ID F1, TK1, TK2, TK3, & TK4 Permittee has completed all the initial one time requirements pertaining to NSPS (Subparts A, J, & Kb) notification and testing in 40 C.F.R. 60.7(a)(1), (2), & (3), 40 C.F.R. 60.8(a), 40 C.F.R. 60.18(f)(1) & (f)(3), 40 C.F.R. 60.106, and 40 C.F.R. 60.115b(d)(1).

[18 AAC 50.040, 7/2/00, and 18 AAC 350(l), /18/97]
[Federal Citation 40 C.F.R. 60, 7/1/99]

## *Section 14. ADEC Notification Form*

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

**BP Exploration (Alaska) Inc**
**Company Name**

**Crude Oil Topping Unit**
**Facility Name**

**Reason for notification:**

❑ **Excess Emission**
*If you checked this box*
*Fill out section 1*

❑ **Other Deviation from Permit Condition**
*If you checked this box*
*fill out section 2*

When did you discover the Excess Emission or Other Deviation:
Date:__/__/__ Time:__:__

### Section 1. Excess Emissions

**(a) Event Information** (Use 24-hour clock)**:**

| | **START** Time**:** (hr:min): | **END** Time: | **Duration** |
|---|---|---|---|
| Date: _____ | _____:_____ | _____:_____ | _____:_____ |
| Date: _____ | _____:_____ | _____:_____ | _____:_____ |
| | | **Total:** | _____:_____ |

**(b) Cause of Event** (Check all that apply)**:**

❑ START UP ❑ UPSET CONDITION ❑ CONTROL EQUIPMENT
❑ SHUT DOWN ❑ SCHEDULED MAINTENANCE ❑ OTHER _____

*Attach a detailed description of what happened, including the parameters or operating conditions exceeded.*

**(c) Sources Involved:**

*Identify each Emission Source involved in the event, using the same identification number and name as in the Permit. List any Control Device or Monitoring System affected by the event. Attach additional sheets as necessary.*

| Source ID No. | Source Name | Description | Control Device |
|---|---|---|---|
| | | | |
| | | | |

**(d) Emission Limit Potentially Exceeded**

*Identify each Emission Standard potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Identify what observation or data prompted this report. Attach additional sheets as necessary.*

| Permit Condition | Limit | Emission Observed |
|---|---|---|
| | | |
| | | |

**(e) Excess Emission Reduction:**

*Attach a description of the measures taken to minimize and/or control emissions during the event.*

### (f) Corrective Actions:

*Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.*

### (g) Unavoidable Emissions:

*Do you intend to assert that these excess emission were unavoidable?*

❑ YES ❑ NO

*Do you intend to assert the affirmative defense of 18 AAC 50.235?*

❑ YES ❑ NO

## Section 2. Other Permit Deviations

### (a) Sources Involved:

*Identify each Emission Source involved in the event, using the same identification number and name as in the Permit. List any Control Device or Monitoring System affected by the event. Attach additional sheets as necessary.*

| Source ID No. | Source Name | Description | Control Device |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

### (b) Permit Condition Deviation:

*Identify each Permit Condition deviation or potential deviation. Attach additional sheets as necessary.*

| Permit Condition | Potential Deviation |
|---|---|
| | |
| | |
| | |

### (c) Corrective Actions:

*Attach a description of actions taken to correct the deviation or potential deviation and to prevent recurrence.*

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name:

Signature: Date:

## *Section 15. Material Balance Calculation, Gaseous Fuels*

### *Hydrocarbon Fuel Gas*

Calculate **$SO_2$ concentration** using the equations below:

$A = [H_2S\ concentration] \div 1{,}000{,}000 =$ _____ ***ppmv*** $\div 1{,}000{,}000 =$ _____

$B = 6.64 \times A = 6.64 \times$ _____ $=$ _____

$C = [vol\%\ inert\ gas_{fuel}] \div 100\% =$ _____ $\% \div 100\% =$ _____

$D = [vol\%\ HC_{fuel}] \div 100\% =$ _____ $\% \div 100\% =$ _____

$E = [wt\%\ C_{HC}] \div 100\% =$ _____ $\% \div 100\% =$ _____

$F = 0.396 \times E = 0.396 \times$ _____ $=$ _____

$G = [wt\%\ H_{HC}] \div 100\% =$ _____ $\% \div 100\% =$ _____

$H = 0.933 \times G = 0.933 \times$ _____ $=$ _____

$I = F + H =$ _____ $+$ _____ $=$ _____

$J = D \times I \times [MW_{HC}] =$ _____ $\times$ _____ $\times$ _____ $=$ _____

$K = B + C + J =$ _____ $+$ _____ $+$ _____ $=$ _____

$L = 21\% - [vol\%_{dry}O_{2,\ exhaust}] = 21\% -$ _____ $\% =$ _____ $\%$

$M = [vol\%_{dry}O_{2,\ exhaust}] \div L =$ _____ $\% \div$ _____ $\% =$ _____

$N = 1 + M = 1 +$ _____ $=$ _____

$O = K \times N =$ _____ $\times$ _____ $=$ _____

$SO_2\ concentration = [H_2S\ concentration] \div O =$ _____ ***ppmv*** $\div$ _____ $=$ _____ ***ppmv***

Where:

**$H_2S$concentration** is the volumetric $H_2S$ concentration of a fuel gas on a dry or wet basis, $10^6$ X *gmole-$H_2S$/gmole-fuel* (i.e. *ppmv*)

**$MW_{HC}$** is the molecular weight of the hydrocarbon portion of the fuel gas, *g-HC/gmole-HC*

**$SO_2$concentration** is the volumetric $SO_2$ concentration of the exhaust gas on a dry basis, $10^6$ X *gmole-$SO_2$/gmole-air$_{exhaust,dry}$* (i.e. *ppmv*)

**vol%$_{dry}O_{2,exhaust}$** is the volume percent $O_2$ of the exhaust gas on a dry basis, 100% X *gmole-$O_2$/gmole-dryexhaust*

**vol%$HC_{fuel}$** is the volume percent hydrocarbons of a fuel gas, 100% X *gmole-HC/gmole-fuel*

**vol%$H_2O_{fuel}$** is the volume percent water vapor of a fuel gas (equals zero if on a dry basis), 100% X *gmole-$H_2O$/gmole-fuel*

**vol%inertgas$_{fuel}$** is the volume percent inert gas (e.g. $N_2$ and $CO_2$) of a fuel gas, excluding water vapor, 100% X *gmole-inertgas/gmole-fuel*

**wt%$C_{HC}$** is the weight-percent carbon of the hydrocarbon portion of a fuel gas, 100% X *g-C/g-HC*

**wt%$H_{HC}$** is the weight-percent hydrogen of the hydrocarbon portion of a fuel gas, 100% X *g-H/g-HC*

For example, a fuel gas on a dry basis is 50-ppm $H_2S$, 2% $CO_2$, 3% $N_2$, and 95% $CH_4$ (i.e. methane) with $\mathbf{vol\%_{dry}O_{2,exhaust}}$ = 15%. The inputs are: $\mathbf{H_2S concentration}$ = 50 ppm; $\mathbf{MW_{HC}}$ = 16; $\mathbf{vol\%inertgas_{fuel}}$ = 2 + 3 = 5%; $\mathbf{vol\%HC_{fuel}}$ = 95%; $\mathbf{wt\%C_{HC}}$ = 75%; and $\mathbf{wt\%H_{HC}}$ = 25%. (Note that $vol\%H_2S_{fuel}$ = 50 / 10,000 = 0.005%, that $\mathbf{vol\%H_2O_{fuel}}$ = 0%.) $\mathbf{SO_2 concentration}$ =1.8 ppmv.

Note that the sum of the following four terms must total 100%: 1) $\mathbf{H_2S concentration}$ converted to a percent by dividing by 10,000 (i.e. $vol\%H_2S_{fuel}$); 2) $\mathbf{vol\%inertgas_{fuel}}$; 3) $\mathbf{vol\%HC_{fuel}}$; and 4) $\mathbf{vol\%H_2O_{fuel}}$. Note that the sum of $\mathbf{wt\%C_{HC}}$ and $\mathbf{wt\%H_{HC}}$ must total 100%.

# Alaska Department of Environmental Conservation

# Air Permits Program

# July 29, 2002

# BP Exploration (Alaska) Inc.

# Crude Oil Topping Unit at Prudhoe Bay

# STATEMENT OF BASIS

# of the terms and conditions for

# Permit No. 265TVP01

**Prepared by Jack Coutts**

## INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 265TVP01.

The Crude Oil Topping Unit is a small petroleum refinery that produces naphtha and diesel fuels for many of the oil producing facilities on the north slope of the Brooks range. The facility is operated by BP Exploration (Alaska) Inc. and others. BP Exploration (Alaska) Inc is the Permittee for the facility's operating permit.

## PROCESS DESCRIPTION

As provided in the application, the facility contains three gas fired heaters, two flares, and four storage tanks. Liquid fuel is not used at the facility.

Section 4 of Operating Permit No. 265TVP01 contains TABLE 1 describing the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table does not create an enforceable limit.

The BPX Crude Oil Topping Unit at Prudhoe Bay is unique among Alaskan COTUs. It's totally gaseous fueled, i.e. no liquid fuels are consumed. Most COTUs have only their crude column overhead gas as fuel gas. That gas, know as refinery fuel gas is rich in propanes. The uniqueness of the PB COTU is that it also has natural gas as a fuel source. That natural gas is mainly methane. Refineries with dual fuel gas sources usually have the option of burning either gas in the case when one type of gas supply is insufficient. The NSPS Subpart J requirements apply only to the refinery fuel gas, not to undiluted (not blended with refinery fuel gas) natural gas.

## BASIS FOR REQUIRING AN OPERATING PERMIT

The Crude Oil Topping Unit requires an operating permit because it is subject to NSPS Subpart A, J and Kb. The combined emissions from the Prudhoe Bay Operations Center, the Main Construction Camp, and the Crude Oil Topping Unit have the potential to emit 100 tons per year (TPY) or more of a regulated air contaminant. These three facilities can be aggregated because they share the same gravel pad. Aggregation of these three facilities classifies them as an 18 AAC 50.325(b)(1) facility. Insignificant emission units owned and controlled by others may be situated on the same gravel pad without changing the facility (PBOC/MCC & COTU) classification.

The Crude Oil Topping Unit meets the definition of operating permit facility in the state regulations at Section 2. The potential emissions were determined using AP-42 emission factors. The emission factors in AP-42 Tables 1.4-1 through 1.4-3 (10/96) and Table 13.5-1 (1/95) were not provided in the application.

Alaska regulations require operating permit applications to include identification of "regulated sources." As applied to Crude Oil Topping Unit, the state regulations require a description of:

Each source subject to a standard adopted by reference in 18 AAC 50.040 [18 AAC 50.335(e)(2)]; and

Sources subject to requirements in an existing DEC permit [18 AAC 50.335(e)(5)]

The emission sources at Crude Oil Topping Unit classified as "regulated sources" according to the above DEC regulations are listed in TABLE 1 & 2 of Permit No. 265TVP01.

## CURRENT AIR QUALITY PERMITS

### Previous Air Quality Permit to Operate

No previous air quality control permit-to-operate exists for this facility.

### Title-V Operating Permit Application History

The previous owner or operator submitted an application on December 1997.

The owner or operator amended this application on January 1998 and June 1999.

The application was declared substantially complete on February 3, 1998.

Additional information was requested and received during development of the draft permit.

## COMPLIANCE HISTORY

The facility has operated at its current location since about 1969. Since it did not have a permit it was not routinely inspected. There were no outstanding compliance issues with the department under the former 18 AAC 50. However, the previous owner of the facility had declared that the facility is not in compliance with 40 C.F.R. 60.18(c)(5), 60.18(f)(4), 60.112b(a)(3)(ii), 60.113b(d) and 60.115b(d)(1) solely because it has not calibrated the installed orifice plate flow meter using EPA's 40 C.F.R. 60, Appendix A reference method 2D. Permittee believes the orifice plate to be accurate and calibration is infeasible at this time. The previous owner on November 28, 1998, requested from EPA a waiver from the method 2D calibration. On June 6, 2001 Permittee contacted EPA region X to determine the status of the waiver request and to re-submit the request. EPA denied the request for a waiver.

## LEGAL BASIS AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

### Conditions 1 - 3, Identification, General Emission Information and Fee Requirements

**Legal Basis:** Emission fees must be paid for each air contaminant emission that reaches 10 TPY. The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

**Factual Basis:** These conditions require the Permittee to pay fees in accordance with the department's billing regulations. The department's billing regulations set the due dates for payment of fees based on the billing date.

The conditions also set forth how the Permittee may recompute assessable emissions. If the Permittee does not choose to annually calculate assessable emissions, emissions fees may be paid based on "potential to emit."

## EMISSIONS

**PBOC and MCC:**

Estimated emissions are based on a maximum estimated 200 hours per year of non-emergency operation for all emergency equipment and assumes 8,760 hours of annual operation for the Cleaver Brooks boilers, the Bayco incinerator, and all insignificant emission units.

The department based the potential-emission calculations using the same operating hours as the Permittee. However, the department assumed the worst-case emission factor from the dual-fired generators. The department's potential emissions estimates are based on AP-42 emission factors [Table 1.4-1 & 2 (7/98), Table 3.1-1 & 3.1-2a (4/00, but 10/96 for PM-10), Table 3.3-1 (10/96), Table 3.4-1 (10/96), Table 2.1-2 & 7 (10/96, uncontrolled), Table 2.2-1 (1/95, uncontrolled), and Table 2.3-1 & 2 (7/1993, uncontrolled)]. The department's estimates of potential emissions for all three facilities are found in Table A.

**COTU:**

The Permittee's potential emissions estimates are based on AP-42 emission factors [Tables 1.4-1 through 1.4-3 (10/96) and Table 13.5-1 (1/95)]. The department's potential emissions estimates are based on AP-42 emission factors [Tables 1.4-1 through 1.4-2 (7/98) and Table 13.5-1 (1/95)]. The Permittee's estimates of potential emissions for the COTU are found in Table B.

The assessable potential to emit is simply those regulated air contaminants for which the facility has the potential to emit quantities greater than 10 tons per year.

**Table A. Department's Emissions Summary for COTU, PBOC, & MCC**

| Pollutant | $NO_x$ | CO | PM-10 | $SO_2$ | VOC |
|---|---|---|---|---|---|
| Total Potential Emissions | 118.3 | 132.0 | 138.8 | 56.3 | 10.5 |
| PBOC/MCC, significant sources | 45.5 | 56.6 | 133.4 | 44.2 | 3.7 |
| PBOC/MCC, insignificant sources | 45.9 | 37.7 | 3.5 | 9.3 | 2.5 |
| COTU (department's estimate) | 26.9 | 37.7 | 1.9 | 2.8 | 4.3 |

**Table B. Permittee's Emission Summary for the COTU**

| | | | | | |
|---|---|---|---|---|---|
| Assessable Potential to Emit for COTU (TPY) under Condition 2.1 | 37 | 45 | 0 | 0 | 0 |

## Conditions 4 & 5, Visible Emissions and Particulate Matter Monitoring

**Legal Basis:** The visible emission standard applies to operation of all fuel-burning equipment in Alaska. Source ID(s) F1, F2, H1, H2, & H4 are fuel-burning equipment. Source ID(s) F2, H1, H2, & H4 combust natural gas fuel. Source ID F1 combusts refinery fuel gas.

**Factual basis:** Condition 4 requires the Permittee to comply with the federal and the state visible emission standards applicable to fuel-burning equipment. The federal requirement is the Permittee shall design and operate Source ID F1 flare to operate with NO VISIBLE EMISSIONS. The Permittee shall not cause or allow the equipment to violate these standards.

Condition 5 requires the Permittee to comply with the state PM (also called grain loading) standard applicable to fuel-burning equipment. The Permittee shall not cause or allow fuel-burning equipment to violate this standard.

Monitoring - The department has found that natural gas fired equipment inherently has negligible opacity. Therefore, certification that a source only burns natural gas ensures that the opacity standard is met. For other equipment, the absence of visible smoke clearly indicates that a source is complying with the visible emission standard.

Source ID F1 is observed daily for the first 30-days for the presence or absence of visible emissions in the exhaust. If emissions are not visible in the first 30 operating days, then observations can be switched to monthly basis. If visible emissions are observed Permittee must take Method 22 readings and Method 9 readings. Corrective actions (Condition 4.4a) must be taken if the Permittee observes visible emission in the exhaust exceeding the 5 minute per 2 hour limit. The Permittee must also use the Method-9 monitoring method when smoke is observed and if action to eliminate visible emissions from the source is not successful. After completing the action, the Permittee must continue to observe the exhaust for the presence or absence of visible emissions. If visible emissions are again observed, the Permittee **must** repeat the procedure.

Recordkeeping - The Permittee is required to record the results of all visible emission observations and record any actions taken to reduce visible emissions.

Reporting - The Permittee is required to report: 1) emissions in excess of the federal and the state visible emissions standard, 2) and deviations from permit conditions. The Permittee is required to include copies of the results of all visible emission observations with the facility operating report.

Monitoring of gas fired appliances for particulate matter is waived, i.e. no source testing will be required, because of the difficulty and questionable results these tests produce when applied to flares. The department has recognized this fact by incorporating the waiver in the State Implementation Plan adopted in November 1984 which has not been federally approved. Exhaust from properly operated gas fired appliances is smokeless. And according to EPA –87- 017 smoke means particulate matter, so smokeless must mean without particulate matter.

Monitoring - There are no permit requirements for initial source testing to show compliance with the PM standard. The department believes that gas fired appliances comply with the PM

standard. However, the department can request a source test for PM emissions from any smoking equipment.

## Condition 6, Sulfur Compound Emissions

**Legal Basis:** In refineries that have two fuel gas sources, the piping is usually flexible so that either gas can be used in all combustion sources. If natural gas is blended into the refinery fuel gas line, then the mixed gas also becomes subject to NSPS Subpart J, no matter how large the proportion of natural gas. For that reason Condition 6.1a. does not list the source to which the condition applies. In the application source ID F1 is the only source to which Condition 6.1a. applies. Source F1 is subject to NSPS Subpart J because it was modified in 1987 by connection to tank TK1. However, if the refinery fuel gas is blended into the natural gas line that supplies the other combustion sources, then these sources would also have to be listed under Condition 6.1a. The intention was not to restrict Permittee's ability to use mixed fuel gases for the heaters.

Note that in Condition 6.2a (iii) the requirement to determine the lower heating value (LHV) of the gas applies only to gases sent to the F1 flare, not to other fuel gases. The F1 flare is the only source at the COTU that is subject to NSPS, Subpart A, 40 C.F.R. 60.18 because it is the only flare at the COTU that is a VOC control device for an NSPS Subpart Kb tank.

**Federal Requirement:** No refinery fuel gas with a hydrogen sulfide ($H_2S$) content in excess of 0.10 grain/dscf (230 mg/dscm) shall be burned in any sources (Source ID F1 in this case), under non-emergency conditions. The same limit does not apply if the fuel gas is 100% natural gas. Also, the flared gas must meet a minimum heating value of 300 Btu/scf.

**State Requirement:** Regardless of what fuel is burned in any of the sources the exhaust gases must not exceed a sulfur compound limit of 500PPM expressed as $SO_2$.

**Factual Basis:** Subpart J of the NSPS limits the concentration of $H_2S$ in fuel gas that can be burned in combustion devices. The cited Subpart J requirements for a CEMs satisfy the department's requirements for compliance monitoring.

## Condition 7, Federal New Source Performance Standards- Volatile Organic Liquid Storage Vessels

**Legal Basis:** Source IDs TK1 – TK4 were built or modified after July 23, 1984. The sources have a storage capacity ranging from 1500 to 26,850 bbls. Source IDs TK2 – TK4 store a volatile liquid with a maximum true vapor pressure of less than 3.5 kPa. Therefore, these sources are subject only to 40 C.F.R. 60.116b(a) and (b).

**Requirement:** For Source IDs TK1 through TK4, the Permittee shall keep readily accessible records for the life of the tank showing the dimensions and an analysis showing the capacity of the storage vessel.

**Factual basis:** This permit condition requires the same records as 40 C.F.R. 60.116b(a) and (b). Source ID TK1 is also subject to 40 C.F.R. 60.116b(a) and (b) and to the requirements of Condition 8.

Because the condition is a permanent recordkeeping condition, no monitoring or reporting is required.

## Condition 8, Federal New Source Performance Standards- Volatile Organic Liquid Storage Vessels

**Legal Basis:** Source ID TK1 was built or modified after July 23, 1984. The source has a storage capacity of 1,500 bbls. The source stores a volatile liquid with a maximum true vapor pressure greater than 3.5 kPa. Therefore, the source is subject to 40 C.F.R. 60.112b(a).

**Requirement:** For Source ID TK1 and F1 in accordance with 40 C.F.R. 60.112b(a)(3)(i)-(ii) the Permittee shall: 1) maintain and operate a closed vent system designed to collect all discharged VOC vapors and gases and shall operate the system with no detectable emissions (VOC leaks) as indicated by a Method 21 instrument reading of less than 500 PPM above background and visual inspections, as determined in 40 C.F.R. 60.485(b), 2) conduct an annual VOC leak check by doing visible, audible, and olfactory inspections for leaks, and 3) monitor the VOC leakage from the closed vent system by conducting an EPA 40 C.F.R. 60, Appendix A Method 21 leak test whenever the leak check indicates leakage.

**Factual basis:** This permit condition allows the flare, F1 to be used as the VOC control device. Permittee has satisfied the requirements of 40 C.F.R. 60.115b(d)(1). The requirements of 40 C.F.R. 60.115b(d)(2) &(3) are incorporated into Condition 11.1.

## Conditions 9 - 10, Federal New Source Performance Standards- General Provisions

**Legal Basis:** Conditions 9 - 10 are federal requirements applicable to Source IDs TK1 and F1 because they are subject to NSPS Subpart A, 40 C.F.R. 60.18 for flares and Subpart Kb for the storage tank.

**Requirements:** Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of Source IDs F1 and TK1, any malfunctions of associated air-pollution control equipment, and any periods during which a continuous monitoring system or monitoring device for Source IDs F1 and TK1 is inoperative.

[Federal Citation: 40 C.F.R. 60.7(b), 7/1/99]

For the continuous monitoring system for $H_2S$ or the monitoring device for flare flame, Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined below) and/or a summary report in the format of Figure 1 below to the EPA Administrator quarterly. The EPA Administrator, on a case-by-case basis, may determine that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar quarter.

[Federal Citation: 40 C.F.R. 60.7(d), 7/1/99]

For the purpose of reports required under Condition 9, an excess emissions and monitoring system performance report shall document:

Any emissions resulting from exceeding the $H_2S$ limits in Condition 6.1a.

Any flame out on flare F1 as determined per Condition 11.

[Federal Citation: 40 C.F.R. 60.7(d), 7/1/99]

The written excess emission report shall contain the following information:

The magnitude of excess emissions for $H_2S$ shall be computed as a 3-hour average computed from three consecutive 1-hour average periods. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic average of all data may be used. The data may be recorded in reduced or non-reduced form (e.g., ppm pollutant). All excess emissions shall be converted into units used in Condition 6.1. After conversion into units of this condition, the data may be rounded to the same number of significant digits as used in this condition. Any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions shall be recorded. The process operating time during the reporting period shall be noted as well.

[Federal Citation: 40 C.F.R. 60.7(c)(1) & 60.13(h), 7/1/99]

Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

[Federal Citation: 40 C.F.R. 60.7(c)(2), 7/1/99]

The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

[Federal Citation: 40 C.F.R. 60.7(c)(3), 7/1/99]

When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[Federal Citation: 40 C.F.R. 60.7(c)(4), 7/1/99]

The summary report form shall contain the information and be in the format shown in figure 1 unless otherwise specified by the EPA Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in Figure 1 need not be submitted unless requested by the EPA Administrator.

If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and excess emission report described in Figure 1 shall both be submitted.

[Federal Citation: 40 C.F.R. 60.7(d), 7/1/99]

**Figure 1--Summary Report -- Excess Emission and Monitoring System Performance**

Pollutant (Circle One—$H_2S$ or flame detector)

Reporting period dates:

From _____to _____

Company: _____

Emission Limitation _____

Address: _____

Monitor Manufacturer and Model No. _____

Date of Latest CMS Certification or Audit _____

Process Unit(s) Description:

Total source operating time in reporting period[1] _____

| Emission data summary[6] | CMS performance summary[6] |
|---|---|
| 1. Duration of excess emissions in reporting period due to: | 1. CMS downtime in reporting period reporting period due to: |
| a. Startup/shutdown | a. Monitor equipment malfunctions |
| b. Control equipment problems | b. Non-Monitor equipment malfunctions |
| c. Process problems | c. Quality assurance calibration |
| d. Other known causes | d. Other known causes |
| e. Unknown causes | e. Unknown causes |
| 2. Total duration of excess emission | 2. Total CMS Downtime |
| 3. Total duration of excess emissions X (100) / [Total source operating time] = _____%[7] | 3. [Total CMS Downtime] X (100) / [Total source operating time] = _____%[7] |

[6] Record all times in hours.

[7] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in this condition shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls.

For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in this condition shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls.

[Federal Citation: 40 C.F.R. 60.7(c) & (d) , 7/1/99]

At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Source IDs F1 and TK1 including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of Source IDs F1 and TK1.

[18 AAC 50.040(a)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 60.11(d), 10/15/73]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standard set forth in Conditions 6, 8, 9, and 11 nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether Source IDs F1 and TK1 would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 60.11(g), 10/15/73]

The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 6, 8, 9, and 11. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 60.12, 10/15/73]

**Factual Basis:** Sources ID TK1 and F1 are subject to the federally enforceable requirement: to maintain records, to submit summary reports, to be operated consistent with good air pollution control practices, for credible evidence, and for concealment of emissions.

## Condition 11, *General Control Device Requirements*

**Legal Basis:** Condition 11 is the federal requirement applicable to Source ID F1 because it is subject to NSPS Subpart A, 60.18, flares.

**Requirement:** The requirement that the Permittee shall design and operate Source ID F1 flare to operate with NO VISIBLE EMISSIONS is addressed by Condition 4.2.

Flare F1 shall be operated with a flame present at all times. The presence of a Flare Pilot Flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

[Federal Citation: 40 C.F.R. 60.18(c)(2) and f(2), 7/1/99]

The flare shall be monitored to ensure that it is operated and maintained in conformance with its design.

[Federal Citation: 40 C.F.R. 60.18(d), 7/1/99]

The flare shall be operated at all times when emissions may be vented to it.

[Federal Citation: 40 C.F.R. 60.18(e), 7/1/99]

The flare shall be used ONLY with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if air or steam assisted; or, 7.45 MJ/scm (200 Btu/scf) or greater if unassisted. The net Heating Value of the gas being combusted shall be calculated using the following equation:

$$HT = K\sum_{i=1}^{N} CiHi$$

Where:

$H_T$ = Net heating value of the sample (MJ/scm); where the net enthalpy per mole of off gas is based on combustion at 25 ºC and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 ºC.

K = Constant = 1.74 x10-7 (1/PPM)(gmole/scm)(MJ/kcal), where the Standard Temperature for (gmole/scm) is 20 $^{o}$C;

Ci = Concentration of sample component i in PPM on a wet basis, as measured for organics by EPA, 40 C.F.R. 60, Appendix A, Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1947-77 (Incorporated by reference through 40 C.F.R. 60.17); and

Hi = Net Heat of Combustion of sample component i, kcal/g-mole @ 25 ºC and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 (incorporated by reference through 40 C.F.R. 60.17) if published values are not available or cannot be calculated.

[Federal Citation: 40 C.F.R. 60.18(c) and 60.18(f), 7/1/99]

Since the flare is air-assisted, it shall be designed and operated with an exit velocity less than the maximum velocity (Vmax), determined by the following equation:

$Vmax = 8.706+0.7084 (H_T)$

Where:

Vmax = maximum permitted velocity, m/sec, and

$H_T$ = net heating value (MJ/scm)

The actual exit velocity of a flare shall be determined by dividing the volumetric flow-rate (in units of standard temperature and pressure), as determined by EPA, 40 C.F.R. 60, Appendix A, Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

[18 AAC 50.040(a)(1), (a)(2)(BB), (a)(2)(Z), (b)(1) and (2)(B) and (C), and 18 AAC 50.350(g)-(l), 6/21/98]
[Federal Citation: 40 C.F.R. 60.18(f), 7/1/99]

**Factual Basis:** Source ID F1 is subject to the federally enforceable requirement: to have a flame without visible emissions, to combust gas with a heating value of 300 BTU/scf or greater, and to be operated with a velocity less than a computed maximum velocity. Because the flare is the control device for VOC emissions from tank TK-1, it is subject to the requirements in Subpart Kb such as 40 C.F.R. 60.113b(d) and 60.115b(d). The flare requirements in Subpart Kb refer back to the requirements in 40 C.F.R. 60.18.

## Conditions 12– 12.7 Insignificant Sources

**Legal Basis:** These general emission standards apply to all industrial processes fuel-burning equipment, and incinerators regardless of size.

**Factual basis:** Conditions 12 through 12.7 require the Permittee to comply with the general standards for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The Department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance with these conditions.

Condition 12.6 requires the Permittee to certify that their insignificant sources comply with applicable requirements.

## Condition 13, Facility Wide Requirements, *Source Aggregation*

**Legal Basis:** The statutory definition in AS 46.14.900(9) of a facility is installations that are adjacent and under common control. The COTU, PBOC, and MCC meet such definition.

**Factual Basis:** The aggregated potential emissions are the potential emissions from the COTU, the PBOC, and the MCC. The aggregation is for the purpose of determining Legal Basis with the modification requirements of 18 AAC 50.300(h)(3) and for determining classifications per 18 AAC 50.325.

## Condition 14, *Compliance Plan and Schedule*

**Legal Basis:** State regulations require that a Title V operation permit contain a compliance plan for permit conditions for which the facility is currently in violation.

**Factual Basis:** This conditions requires that the Permittee within a fixed time period take actions to comply with parts of 40 C.F.R. 60.18 or to obtain from EPA a waiver from those federal requirements.

The Permittee is also required to submit progress reports until the compliance issue is resolved.

**Compliance Status as of May 1, 2002:** On August 7, 1997, EPA wrote to ARCO Alaska, Inc. (previous owner) stating, “This letter is in response to your May 20, 1997, resubmittal of a request for waiver of the flow measurement requirement of 40 C. F. R. part 60.18(f)(4). For the reasons explained below, I am granting your request and waiving the requirement of

40 C. F. R. part 60.18(f)(4) to measure the flow of vapors to the flare which originate from the residuum tank. Pleases note that the overhead accumulator must still comply with the flow measurement requirements of 40 C. F. R. part 60.18(f)(4)."

On June 6, 2001, BP Exploration re-submitted a request for EPA Region 10 to waive gas meter calibration requirements associated with a performance test required for a flare at the COTU. EPA responded with a denial of the waiver request in a letter dated April 5, 2002.

### Condition 15, Generally Applicable Requirements, *Asbestos NESHAP*

**Legal Basis:** The asbestos demolition and renovation requirements apply if the Permittee engages in asbestos demolition or renovation.

If the Permittee engages in asbestos demolition and renovation, then these requirements may apply.

**Factual Basis:** The condition cites and requires compliance with the regulations that will apply if the Permittee engages in asbestos demolition or renovation. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

### Condition 16, Generally Applicable Requirements, *Benzene Waste Operations NESHAP*

**Legal Basis:** Permittee has determined that certain reporting and recordkeeping requirements of 40 C.F.R. 61 Subpart FF apply to the COTU.

**Factual Basis:** The condition cites and requires compliance with the regulations that will apply if the Permittee has certain quantities of benzene in the wastewater. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

### Condition 17, Generally Applicable Requirements, *Protection of Stratospheric Ozone NESHAP*

**Legal Basis:** The requirements apply if the Permittee uses the regulated substances. If the Permittee engages in activities involving these substances, then these requirements may apply.

**Factual Basis:** The condition requires the Permittee to comply with the standards for recycling and emission reduction of substances set forth in 40 C.F.R. 82, Subparts F, G, and H that will apply if the Permittee uses these substances. Because these regulations include adequate monitoring and reporting requirements simply citing the regulatory requirements is sufficient to ensure compliance with this federal regulation.

### Condition 18, Generally Applicable Requirements, *Good Air Pollution Control Practice*

**Legal Basis:** Applies to all sources.

**Factual basis:** The condition requires the Permittee to comply with good air pollution control practices for all sources.

Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate more quickly than with appropriate maintenance. If appropriate maintenance is not applied to the equipment, the department may have to apply more frequent periodic monitoring requirements (unless the monitoring is already continuous) to ensure that the monitoring results are representative of actual emissions.

For existing equipment, the Permittee is not specifically required to follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for conditions in Alaska, or don't relate to minimizing emissions, the Permittee can require revisions as a condition of purchase for existing equipment. Condition 18.1 however, does require the Permittee to comply with manufacturer's recommendations for control equipment, because the efficient operation of control equipment directly impacts emissions. The department does not anticipate that conditions in Alaska will require maintenance procedures that are different than those that are recommended by the manufacturer. If the manufacturers' procedures are not available, then the Permittee is required to comply with a specific operation and maintenance (O & M) plan for control equipment as approved by the department.

In specifying manufacturer's recommendations, it is not the department's intent to endorse only the manufacturer's line of replacement parts. The condition states that any suitable replacement parts or equipment can be used.

Condition 18.2 requires the Permittee to keep maintenance records to show that proper maintenance procedures were followed, and to make the records available to the department. The department may use these records as a trigger for requesting source testing if the records show that maintenance has been deferred.

## Condition 19, Generally Applicable Requirements, *Dilution*

**Legal Basis:** This state regulation applies to the Permittee because the Permittee is subject to emission standards in 18 AAC 50.

**Factual Basis:** The condition prohibits the Permittee from diluting emissions as a means of compliance with any standard in 18 AAC 50.

## Condition 20, Generally Applicable Requirements, *Reasonable Precautions to Prevent Fugitive Dust*

**Legal Basis:** Bulk material handling requirements apply to the Permittee because the Permittee may engage in bulk material handling, transporting, or storing; or will engage in industrial activity at the facility.

**Factual Basis:** The underlying regulation, 18 AAC 50.045(d), requires the Permittee to take reasonable action to prevent particulate matter (PM) from being emitted into the ambient air. Since the facility is not a significant source of fugitive PM emissions there is no need for monitoring or reporting.

## Condition 21, Generally Applicable Requirements, *Stack Injection*

**Legal Basis:** Stack injection requirements apply to the facility because the facility contains a stack or source that could be modified after November 1, 1982.

**Factual Basis:** The condition prohibits the Permittee from releasing materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

## Condition 22, Generally Applicable Requirements, *Open Burning*

**Legal Basis:** The open burning state regulation in 18 AAC 50.065 applies to the Permittee if the Permittee conducts open burning at the facility.

**Factual Basis:** The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

Extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through Condition 24, which requires a record of complaints. Therefore, the department does not believe that additional monitoring is warranted.

## Condition 23 & 24, Generally Applicable Requirements, Air Pollution Prohibited and Monitoring, *Record Keeping and Reporting for Air Pollution Prohibited*

**Legal Basis:** Applies to the facility because the facility will have emissions.

**Factual Basis:** The condition restates the general prohibition on injurious air emissions, which applies to any emissions from the facility. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can violate this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is to report any complaints and injurious emissions. The plant does not handle any large quantities of hazardous air pollutants. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for these complaints and to submit copies of these records upon request of the department.

## Condition 25, Generally Applicable Requirements, *Technology-Based Emission Standard*

**Legal Basis:** Applies to the facility because the facility contains equipment subject to a technology-based emission standard. Technology-based emission standards include Conditions 6.1, and 8 through 11, and 17.

**Factual Basis:** This condition restates a regulation that requires the Permittee to take reasonable steps to minimize emissions if certain activity causes exceedence of a technology-

based emission standard. Because the technology-based emission standard itself is a condition of the permit, the Permittee will report the excess emissions per Condition 39. Because the excess emission report requires information on the steps taken to minimize emissions, this report is adequate monitoring for compliance with this condition.

### Condition 26, Generally Applicable Requirements, *Permit Renewal*

**Legal Basis:** Applies if the Permittee intends to renew the permit.

**Factual Basis:** The condition restates the regulatory deadlines, citing the specific dates applicable to the facility. Submittal of the renewal application is sufficient monitoring, recordkeeping and reporting.

### Conditions 27, General Source Testing and Monitoring Requirements, *Requested Source Tests*

**Legal Basis:** Standard condition to be included in all permits.

**Factual Basis:** Condition requires the Permittee to conduct source tests as requested by the department, therefore no monitoring is needed. Conducting the requested source test is its own monitoring.

### Conditions 28 through 34, General Source Testing and Monitoring Requirements, *Extension Requests, Test Plans, Test Notification, Test Reports, Operating Conditions, Reference Test Methods, Excess Air Requirements*

**Legal Basis:** Applies when the Permittee is required to conduct a source test.

**Factual Basis:** These conditions restate regulatory requirements for source testing. As such, they supplement the specific monitoring requirements stated elsewhere in this permit. The tests reports required by later conditions adequately monitor compliance with these conditions, therefore no specific monitoring, reporting, or recordkeeping is needed.

### Condition 35, General Recordkeeping, Reporting, and Compliance Certification Requirements, *Certification*

**Legal Basis:** Applies because the permit requires the Permittee to submit reports, and because the condition is a standard condition.

**Factual Basis:** This condition restates the regulatory requirement that all reports must be certified. To ease the certification burden, the condition allows the excess emission reports to be certified with the semi-annual operating report, although the excess emission reports must be submitted more frequently. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

### Condition 36, General Recordkeeping, Reporting and Compliance Certification Requirements, *Submittals*

**Legal Basis:** Applies because the Permittee is required to send reports to the department.

**Factual Basis:** This condition merely specifies where submittals to the department should be sent. Receipt of the submittal at the correct department office is sufficient monitoring for this

condition. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

### Condition 37, General Recordkeeping, Reporting and Compliance Certification Requirements, *Information Requests*

**Legal Basis:** Applies to all Permittees, and incorporates a standard condition

**Factual Basis:** Incorporates a standard condition in regulation, which tells the Permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

### Condition 38, General Recordkeeping, Reporting, and Compliance Certification, *Recordkeeping Requirements*

**Legal Basis:** Applies to records required by a permit.

**Factual Basis:** The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional monitoring, recordkeeping or reporting is required. The state recordkeeping requirement of five years overrides the NSPS Subpart A recordkeeping requirement of 2 years.

### Condition 39, General Recordkeeping, Reporting, and Compliance Certification Requirements, *Excess Emission and Permit Deviation Reports*

**Legal Basis:** Applies when the emissions or operations deviate from the requirements of the permit.

**Factual Basis:** This condition satisfies two regulatory requirements related to excess emissions—the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional MR&R is necessary to ensure compliance with this condition. Please note that there may be additional federally required excess emission reporting requirements.

**Table C. List of State Excess Emission and Deviation Reporting Requirements**

| **Condition** | Report |
|---|---|
| 4.1b | Whenever the fuel combusted in Sources ID F2, H1, H2, & H4 is not natural gas. |
| 4.8 | Failure to monitor, whenever flare's exhaust is visible, & 20 % opacity exceeded. |
| 6.1d and 6.2c | Whenever the fuel combusted causes sulfur compound emissions to exceed the standard of Condition 6. |
| 8.1 | Whenever VOC leaks exceed background by more than 500 ppm. |
| 11.1 | Whenever the flare has a flame-out. |
| 11.3 | Whenever flared gas heating value is less than 300 BTU/scf. |
| 11.5 | Whenever flared gas velocity exceeds the limit in 40 CFR 60.18(f)(6). |
| 24 | Whenever emissions potentially threaten human health, welfare, or safety. |

### Condition 40, General Recordkeeping, Reporting, and Compliance Certification, *NSPS and NESHAP Reports*

**Legal Basis:** Applies to facilities subject to NSPS and NESHAP federal regulations.

**Factual Basis:** The condition supplements the specific reporting requirements in 40 C.F.R. 60. The permit does not need any monitoring, recordkeeping or reporting. The reports required by Conditions 6.1c, 8 through 11, 14.3, and 21 are adequate monitoring for compliance with this condition.

### Condition 41, General Recordkeeping, Reporting, and Compliance Certification Requirements, *Operating Reports*

**Legal Basis:** Applies to all permits.

**Factual Basis:** The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition. The intent of the condition is to require the information for reporting periods following permit issuance.

Table D. List of Documents to be Attached to the Facility Operating Report[9]

| Condition | Parameter | Description |
|---|---|---|
| 4 | Visible Emissions | Copies of written records required by Conditions 4.4 through 4.9. |
| 6.1c | 40 C.F.R. 60, Subpart A | The federal excess emissions and Monitoring systems report. |
| 6.2d | Fuel gas $H_2S$ content | The certified semiannual statement from the fuel supplier.<br>Any sulfur content analyses. |
| 9 | Excess. Emission Reports | Copy of Excess Emission and Monitoring systems performance report. |
| 12.5 | Increased emissions | When insignificant sources increase emissions enough to become significant. |
| 24 | Prohibited air pollution | Number, type and status of complaints. |
| 40.1 | Federal reports | Copy of any NSPS and NESHAPS reports. |
| 39 | Excess Emissions Reports | A summary of all excess emissions and permit deviations reports submitted under Condition 39 that occurred during the reporting period (see Table C above). |

### Condition 42, General Recordkeeping, Reporting, and Compliance Certification Requirements, *Compliance Certification*

**Legal Basis:** Applies to all Permittees.

**Factual Basis:** This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no monitoring, recordkeeping or reporting is needed.

### Conditions 43 through 49, Standard Conditions Not Otherwise Included in the Permit

**Legal Basis:** Applies to all operating permits.

**Factual Basis:** These are standard conditions required for all operating permits.

[9] This table is for informational purposes. It does not relieve the Permittee of any requirements stated in Operating Permit 265TVP01.

## Condition 50, Permit As Shield From Inapplicable Requirements, *Permit Shield*

**Legal Basis:** Applies because the Permittee has requested a shield for the applicable requirements listed under this condition. A permit shield can be granted only for requirements that do not apply to a source at the facility.

**Factual Basis:** TABLE 3 explains the permit shield requests and the department's Legal Basis determination. This permit condition sets forth the requirements that the department determined were not applicable to the facility, based on the permit application. Permittee has requested a shield from: 40 C.F.R. 60.7(a)(1), (2), (3) & (4), 40 C.F.R. 60.8(a), 40 C.F.R. 60.18(f)(1) & (f)(3), 40 C.F.R. 60.106, 40 C.F.R. 60.115b(d)(1). For sources ID F1, TK1, TK2, TK3, & TK4 Permittee has satisfied those applicable 40 C.F.R.s. However, satisfaction of those requirements does not make them non-applicable so a shield cannot be granted.

40 C.F.R. 60.18(f)(1) & (f)(3) and 40 C.F.R. 60.7(a)(4) have continuing requirements to which the Permittee must satisfy. The department cannot shield the Permittee from the test and evaluation methods of 40 C.F.R. 60.18(f)(1) & (3). The department cannot shield the Permittee from making the notification required by 40 C.F.R. 60.7(a)(1), (2) & (3). Those 40 C.F.R. 60 requirements that have been satisfied are so noted. And requirements that are continuing have also been identified. A shield for the flare F1 and storage tank TK1 can be granted from 40 C.F.R. 60.7(a)(4) because F1 and TK1 are not existing facilities per 40 CFR 60.2.

A permit shield is granted only for those portions of 40 C.F.R. 61, Subpart FF that do not apply to COTU

Permittee has requested a shield from 18 AAC 50.045(b) and 50.045(c) because Permittee believes that compliance with the permit satisfies these prohibitions. The fact that the facility has not broken any prohibitions does not make the prohibitions non-applicable so a shield cannot be granted.

Permittee has requested a shield from 18 AAC 50.201 because Permittee believes that this program administration requirement is not applicable until the department requires the Permittee to evaluate the effect of the facility's emissions. The fact that the facility's emissions are so small and the requirement has not been triggered does not make the requirement non-applicable so a shield cannot be granted. The emissions are insufficient for the facility to be declared as an operating permit facility per 18 AAC 50.325(b)(1). The department has not made the specific findings that would trigger 18 AAC 50.201 for the facility as of the date of permit issuance.

Permittee believes that 18 AAC 50.055(g) should be included in the permit shield on the basis that all potentially affected equipment at the COTU was constructed prior to November 1, 1982 and has not been modified since that date. This rule falls into the category of a requirement that does not apply at the time of permit issuance, as stated in the introductory text of Section 13 of the permit. The department cannot satisfy your above request to shield from this type of prohibition. Just because the stacks were constructed prior to November 1, 1982, does not mean that they can not be modified for stack injection at any time. There is no other condition addressing this potential modification so this type of prohibition condition is necessary.